

1. A method of operating a communication system having a plurality of packet network routes and a plurality of packet substitution methods, the method comprising:

receiving a set-up signaling message for a call into a signaling processor;

5 in the signaling processor, processing the set-up signaling message to select one of the packet network routes for the call;

in the signaling processor, processing the set-up signaling message to select one of the packet substitution methods for the call;

in the signaling processor, generating a control message for the call indicating the selected packet network route and the selected packet substitution method;

10 transferring the control message for the call from the signaling processor;

in a routing system, receiving the control message for the call;

in the routing system, receiving user communications for the call, and in response to the control message, transferring the user communications using the selected packet network route; and

15 in the routing system, in response to the control message, implementing the selected packet substitution method to handle lost packets for the call.

2. The method of claim 1 wherein processing the set-up signaling message to select the selected packet substitution method for the call comprises processing a calling party

20 category in the set-up signaling message for the call.

3. The method of claim 1 wherein processing the set-up signaling message to select the selected packet substitution method for the call comprises processing echo control information in the set-up signaling message for the call.

5 4. The method of claim 1 wherein processing the set-up signaling message to select the selected packet substitution method for the call comprises processing a transmission medium requirement in the set-up signaling message for the call.

5. The method of claim 1 wherein the set-up signaling message for the call comprises an  
10 Initial Address Message (IAM).

6. The method of claim 1 wherein the set-up signaling message for the call comprises an Integrated Services Digital Network (ISDN) message.

15 7. The method of claim 1 wherein the set-up signaling message for the call comprises Channel Associated Signaling (CAS).

8. The method of claim 1 wherein the selected packet substitution method comprises white noise substitution.

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9. The method of claim 1 wherein the selected packet substitution method comprises silence substitution.

10. The method of claim 1 wherein the selected packet substitution method comprises last packet substitution.

11. A communication system having a plurality of packet network routes and a plurality  
5 of packet substitution methods, the communication system comprising:

a signaling processor configured to receive a set-up signaling message for a call, process the set-up signaling message to select one of the packet network routes for the call, process the set-up signaling message to select one of the packet substitution methods for the call, generate a control message for the call indicating the selected packet network  
10 route and the selected packet substitution method, and transfer the control message for the call from the signaling processor; and

a routing system configured to receive the control message for the call, receive user communications for the call, transfer the user communications using the selected packet network route in response to the control message, and implement the selected packet  
15 substitution method to handle lost packets for the call in response to the control message.

12. The communication system of claim 11 wherein the signaling processor is configured to process a calling party category in the set-up signaling message to select the selected packet substitution method for the call.

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13. The communication system of claim 11 wherein the signaling processor is configured to process echo control information in the set-up signaling message to select the selected packet substitution method for the call.

14. The communication system of claim 11 wherein the signaling processor is configured to process a transmission medium requirement in the set-up signaling message to select the selected packet substitution method for the call.

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15. The communication system of claim 11 wherein the set-up signaling message for the call comprises an Initial Address Message (IAM).

16. The communication system of claim 11 wherein the set-up signaling message for the  
10 call comprises an Integrated Services Digital Network (ISDN) message.

17. The communication system of claim 11 wherein the set-up signaling message for the call comprises Channel Associated Signaling (CAS).

15 18. The communication system of claim 11 wherein the selected packet substitution method comprises white noise substitution.

19. The communication system of claim 11 wherein the selected packet substitution method comprises silence substitution.

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20. The communication system of claim 11 wherein the selected packet substitution method comprises last packet substitution.